

Pluto-Kuiper Belt Mission Concept Study Questions and Answers

Questions and Answers as Discussed at the Concept Study Kickoff Meeting, with New Information in Bold Font:

1. QUESTION: Will the same system be used for announcements and updates as was used for Step 1?

ANSWER: Yes. For example, a modification to the AO has been posted extending the CS from 2 months to 3.

2. QUESTION: Could the PI's be notified when changes are made?

ANSWER: Yes, we can do that now that there are only two teams involved. However, teams should still check the web site regularly.

3. QUESTION: What exactly is a draft agreement (for international participation)?

ANSWER: This should be a semi-formal document, but it does not yet need to be signed. The next speaker will clarify this.

4. QUESTION: Are those 2 days real days or work days (amount of advance notice for preparing responses to written questions prior to the site visit)?

ANSWER: ~~Those are real days. We realize it may be awkward for the second set of visits, as this involves weekend work. We will look at the schedule to see if we can do anything about this. We want everything to be completely fair between both teams.~~

The written questions will be faxed to each of the PKB Teams with an equal amount of time to address the questions prior to the site visit. The schedule for these questions will be coordinated with each team.

5. QUESTION: The chart shows that there is a low risk associated with delay of Phase beyond November 1?

ANSWER: Yes, the risk is low because it is our goal to allow you to begin Phase B by then, and we will do everything possible to stick to a schedule that will allow this to happen. **The adverse impact of a Phase B kickoff delay beyond November 1, 2001 would be high. Until we know if and when funding may be provided, it is difficult to answer this question more completely; however, these are the implications.**

6. QUESTION: Is it correct that an 'interim agreement' covers the study phase?

ANSWER: Yes. This allows you to begin work before the final agreements are in place.

7. QUESTION: What should we say in the proposal about dual compatibility?

ANSWER: We need to understand the impacts if your team cannot maintain this compatibility through mid-2002. So please contact me (Darrell Foster) directly if you have questions, email is best. We are working to get commitment letters ready for both of you.

8. QUESTION: Will you be sharing these conversations on the web site?

ANSWER: This is like Discovery, I (Darrell Foster) am your POC and, since you are selected already, not all answers will be posted. Those of a general nature will be, but for the most part our conversations will be private. (Foster is not part of the evaluation.)

9. QUESTION: Are cost and performance for any 3rd stage carried by the spacecraft?

ANSWER: Yes. Take the information provided for the 1st and 2nd stages and integrate the 3rd stage.

10. QUESTION: So the performance curves given in the AO for upperstages are for?

ANSWER: Are for reference only.

11. QUESTION: So we shouldn't use those curves? We should work with you?

ANSWER: Yes. We need to make sure that we all understand the performance.

12. QUESTION: We all know Pluto is exciting. Do the people upstairs share this view?

ANSWER: Certainly Dr. Weiler is strongly committed to E/PO.

13. QUESTION: What is the Mission Definition Requirements Agreement (MDRA)?

ANSWER: It is one of the required appendices.

14. QUESTION: Where can we find information about what it is?

ANSWER: There is an example of one on the web site. If that doesn't help, ask Brad Perry.

15. QUESTION: You said that all partners must sign the MDRA. What constitutes a "partner"? Every CoI institution?

ANSWER: We will need to clarify that. We will follow this up with more information on the web. **All major partners and responsible organizations must sign the MDRA. CoI institutions with a minor role are not required to sign the MDRA; however, all significant areas required to implement the project should have signatures in the MDRA.**

16. QUESTION: Do you need the information on NEPA/launch approval in the report? Should we be working this now?

ANSWER: Yes, talk with Mark Dahl as soon as you can and get started. He can help you with details. He is already working on the Environmental Impact Study (EIS) and workbooks.

17. QUESTION: Could you elaborate on the site visits? What is the format?

ANSWER: This will be a 1-day visit to the site of your choice. Coordinate the visit with Brad Perry. There are a few rules: 8 hours of presentations, no splinter groups, 1 hour tour, 1 hour for lunch and private evaluation team caucus. That caucus will help us ensure that we are getting the information we need from you. We want to look at the implementation, see the commitment, and have you answer our questions. In addition to the written questions you will receive ahead of time, we will have oral questions. But we will try not to let those questions derail your agenda. These site visits have been done before (Discovery, Explorer) at both your organizations. Someone there should be able to help you.

18. QUESTION: You had indicated that there would be 2 days to answer questions. Discovery had longer, which I assume is because we are on such a tight schedule. But do we really need to spend the weekend answering questions? This may be a problem.

ANSWER: ~~Yes, I can see that might be difficult and we will try to accommodate. The schedule is not finalized, but we do need to keep things moving so we can meet the required early November Phase B start date. This would give 37 months for Phases B/C/D. Compared to Discovery's 36 months for Phase C/D, you can see we are already compressed. (Comment from the floor: It seems like a good trade to use a weekend to save a week.)~~

See response to #4.

19. QUESTION: Could we use 2 weekend days to count as 1 business day?

ANSWER: ~~We'll have to work on this. As of June 25, 2001, site visit arrangements have been finalized with both teams. The two-day period for preparing answers to the written questions will not require any weekend days.~~

See response to #4.

20. QUESTION: In terms of the implementation approach and refining our costs. Can you do something about tightening up that \pm \$30M on the ELV envelopes?

ANSWER: Sorry, we know that is difficult. But we don't know what the ELV providers will bid and if we tighten up those envelopes we may make one launch option look better than another and that would be unfair to their competition. The numbers we give capture the whole, likely range of costs.

21. QUESTION: But the proposers may select based on the cost groupings?

ANSWER: Yes. This is the safer way to deal with uncertain costs. We know it is difficult for you, but it is probably worse the other way.

Written Questions and Answers:

22. QUESTION: Will detailed cost information be available for individual launch vehicles in Phase A, or should we continue to use the lumped cost classes given for the Step 1 proposal?

ANSWER: See Questions #20 and 21 above.

23. QUESTION: What inputs from the teams are needed in the Phase A study to support NASA's launch vehicle procurement?

ANSWER: Coordinate all ELV details with the ELV Point of Contact (POC), Darrell Foster.

24. QUESTION: The science section format described in the Study Guidelines is different from the AO. Can it be the same as the AO with regard to page count, font size and foldouts?

ANSWER: The page count, font size, and foldout requirements specifications contained in the June 15, 2001 version of the Guidelines and Criteria for the Phase A Concept Study apply. These requirements are identical to those from the amended AO.

25. QUESTION: Please elaborate on study schedules, deliverables, site visits, orals and due dates.

ANSWER: Concept Study Reports are due at NASA Peer Review Services (NPRS) not later than 4:30 p.m. EDT on September 18, 2001. Concept Study Report requirements are contained in the document, Guidelines and Criteria for the Phase A Concept Study. See Questions #17, 18, and 19 regarding site visits (oral presentations).

26. QUESTION: Regarding the Software IV&V Plan. Do you require IV&V for all ground software (even ground post processing tools, etc.)?

ANSWER: Per the Guidelines and Criteria for the Phase A Concept Study, software IV&V is required for all project-produced flight and ground software.

27. QUESTION: How will proposers interact with Launch Vehicle providers? How will the Atlas provider manage the potential conflict of interest?

ANSWER: Teams should interface directly with the ELV POC, Darrell Foster rather than directly with the industry providers. NASA will not necessarily stand behind any answers/advice given through channels directly with the manufacturers. The letters of commitment for launch services will be signed by Foster, not the ELV industry providers.

28. QUESTION: Is the JPL Navigation team still a national resource? How will proposers interact with the JPL Navigation group?

ANSWER: The DSN POC, for coordinating all navigation, tracking, and communications requirements is Barry Geldzahler.

29. QUESTION: Are the proposers responsible for unforeseen increases in SOMO costs that occur after mission award?

ANSWER: ~~Generally no, the proposers would not be responsible for unforeseen increases in SOMO costs that occur after mission award.~~

If increases in the price of services are validated and approved at the Agency level (by an appropriate independent validation organization e.g. a DCAS audit), then the project becomes responsible for these changes.

30. QUESTION: Can required budget tables in the E/PO section be excluded from the 98-page limit?

ANSWER: The page limit for Sections F. Technical Approach, G. Management Plan, H. Education, Outreach, Technology, and SDB Plan, and I. Phase B Plan has been increased to 118 pages in the June 15, 2001 revision of the Guidelines and Criteria for the Phase A Concept Study. Where appropriate for E/PO activities described in Section H., reference may be made to budget information contained in Section J. Cost Plan for Phases A through E.

31. QUESTION: Where can we find definitions of the Technology Readiness Levels (TRL's)?

ANSWER: For definitions of the TRL levels, please see the web site:
<http://www.hq.nasa.gov/office/codeq/trl/trl.pdf>.

32. QUESTION: Please provide clarification as to the required Technology Readiness Level (TRL) for new technology.

ANSWER: As stated at the Concept Study Kickoff Meeting, "new technology items will add risk unless they are flight qualified (TRL 8), or have identified/demonstrated backups." TRL 8 is defined as, "actual system completed and flight qualified through test and demonstration (ground or flight)." Please recognize that there is a difference between new developments and new technology. New developments, a broader category, can include new technology or a re-scaling of existing, proven technology. Prudent risk management requires that new technology, as well as other risks, be retired at appropriate development milestones (PDR, CDR, etc.).

33. QUESTION: As the form SF-1411 is no longer valid, how should we handle the requirement for this form as described in the document, *Guidelines and Criteria for the Phase A Concept Study*, Part II, Section J.1.a?

ANSWER: The SF-1411 is no longer required. Contract pricing for Phase B must be reported following the instructions in Part II, Section L.14 of the document, *Guidelines and Criteria for the Phase A Concept Study*. Please note that the reference within Section L.14 to the Discovery Program Library (DPL) document 30 is also the same as document 31 in the PKB Library (Federal Acquisition Regulations (FAR) General Services Administration).

34. QUESTION: Since the SF-1411 Form is no longer required, is it necessary for the industrial partners to certify their costs?

Answer: Yes, it is still necessary for the industrial partners to certify their costs.